

## DEPARTMENT OF THE INTERIOR

## Fish and Wildlife Service

## 50 CFR Part 17

## Endangered and Threatened Wildlife and Plants; Listing as Threatened with Critical Habitat for the Coachella Valley Fringe-Toed Lizard

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** The Service determines the Coachella Valley fringe-toed lizard (*Uma inornata*) to be a Threatened species and determines the Critical Habitat of the species. The lizard occurs only on windblown sand deposits in the Coachella Valley of Riverside County, California. This action is being taken because the species is continuing to decline because of habitat destruction for agricultural and developmental purposes. For these reasons, the State of California has also recently added this species as endangered to the list of State protected species. The rule provided the full protection of the Endangered Species Act of 1973, as amended, to this species. **DATES:** The rule becomes effective on October 27, 1980.

**ADDRESS:** Questions concerning this action may be addressed to Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240. Comments and materials relating to the rule are available for public inspection by appointment during normal business hours at the Service's Office of Endangered Species, Suite 500, 1000 N. Glebe Road, Arlington, Virginia.

**FOR FURTHER INFORMATION CONTACT:** Mr. John L. Spinks, Jr., Chief, Office of Endangered Species, U.S. Fish and Wildlife Service, U.S. Department of the Interior, Washington, D.C. 20240 (703/235-2771).

**SUPPLEMENTARY INFORMATION:****Background**

On November 3, 1977, the Fish and Wildlife Service published a notice in the *Federal Register* (42 FR 57492) to the effect that a review of the status of ten reptiles was being conducted. The Coachella Valley fringe-toed lizard was included as part of that review. Based on information received from the California Department of Fish and Game, the California State Office of the Bureau of Land Management and eight professional biologists, a proposal was published in the *Federal Register* (43 FR 44806-08) to list the Coachella Valley fringe-toed lizard as Threatened and to

designate its Critical Habitat. Before final action could be taken Congress passed the Endangered Species Act Amendments of 1978 (Pub. L. 95-632; 92 Stat. 3751). These amendments substantially modified the procedures the Service must follow when designating Critical Habitat. In order to comply with the new requirements the Critical Habitat portion of the proposed rule was withdrawn March 6, 1979 (44 FR 12382-84).

On May 28, 1980, the Service repropoed a revised Critical Habitat based on information received since the original proposal (see the *Federal Register*, 45 FR 36038-36041, for details of the revised boundaries of Critical Habitat). On June 27, 1980, this species was listed as endangered by the California Department of Fish and Game because of continuing habitat destruction in the Coachella Valley.

In conjunction with the reproposal for Critical Habitat, the Service held a public meeting in Palm Springs, California, on June 20, 1980, to explain the proposal, answer public questions, and to solicit additional information on the biology of the lizard and the economic effects of a Critical Habitat designation on Federally authorized and funded projects in the area. In addition, a public hearing was held on July 7, 1980, at Palm Springs, California, to take testimony on the designation of Critical Habitat. That testimony is part of the public record and has been carefully considered in the drafting of this final rule.

All public comment periods were closed on July 28, 1980.

The following section provides a brief introduction to the biology of the Coachella Valley fringe-toed lizard. More information may be obtained by consulting the references cited at the end of this section.

The Coachella Valley fringe-toed lizard is known only from the Coachella Valley, Riverside County, California. Like other members of the genus *Uma*, it is adapted for living in fine wind-blown sand, and it is restricted to areas where this habitat occurs in the floor of the Coachella Valley.

England and Nelson (1976) estimated the historical (pre-settlement) range of the Coachella Valley fringe-toed lizard to be 324 square miles but did not estimate the amount of suitable habitat within this range. By 1975, the historical range was reduced to 236 square miles with 120 square miles of suitable habitat remaining.

A comparison of historical locality records for the Coachella Valley fringe-toed lizard with a 1928 Coachella Valley soil survey indicates that the amount of

historical habitat available was approximately 200 square miles (England, pers. comm. to John Brode). Aerial photographs taken in 1955 and 1979 by the U.S. Army Corps of Engineers and the ground surveys conducted by England and Nelson (1976) in 1975 were used to determine habitat loss. From this information, England (pers. comm.) calculated that only 99 square miles of blow-sand habitat are now available to this species, a reduction of 51 percent of the original pre-settlement habitat.

Little information is available concerning population densities of the Coachella Valley fringe-toed lizard. However, Turner *et al.* (1979) estimated the density of the Coachella Valley fringe-toed lizard in a study plot located within the PCH (section 36) to be about four lizards per acre. England and Nelson (1976) reported that track densities ranged from 0 to 52 on 43 1 x 100 meter study plots. The track densities indicated that the numbers of fringe-toed lizards varied widely among different sites, and that damage to the habitat, especially plant damage, could reduce the track densities. Dr. Wilbur W. Mayhew (pers. comm.) indicated that the densities of Coachella Valley fringe-toed lizards appeared greater during 1950-60 than in 1978-79. These reductions in densities were most apparent in areas of human activity.

In addition, field work by Dr. F. B. Turner, concluded on June 20, 1980, had demonstrated the importance of blow sand to the lizard and the effects of wind barriers on their distribution (letter dated July 14, 1980, to Coachella Valley Fringe-toed Lizard Advisory Committee). Turner found that the density of lizards on the downwind side of windbreaks ranged from 0 to 0.4 per hectare, whereas on the upwind side the densities ranged from 4.4 to 45.0 per hectare. These are especially important figures since the effect of such a windshadow can extend for miles.

**Summary of Comments and Recommendations**

Section 4(b)(1)(C) of the Act requires that a summary of all comments and recommendations received be published in the *Federal Register* prior to adding any species to the list of Endangered and Threatened Wildlife and Plants. In the September 28, 1978, *Federal Register* (43 FR 44806-44808) the Service proposed to list the Coachella Valley fringe-toed lizard (*Uma inornata*) as Threatened with Critical Habitat. The Critical Habitat portion of this proposal was withdrawn on March 6, 1979 (44 FR 12382-12384) and repropoed on May 28, 1980 (45 FR 36038-36041).

Comments received thru July 28, 1980, on the proposed listing of this lizard are summarized below. A total of 187 comments were received in response to the original proposal and reproposal of Critical Habitat. Twenty comments were formally presented for the record at the public hearing in Palm Springs; these comments are summarized below with the other comments. In addition, four petitions were submitted which supported the listing of the Coachella Valley fringe-toed lizard; these petitions contained a total of 105 signatures.

For the sake of convenience, the Coachella Valley fringe-toed lizard will be abbreviated to CVFTL in the following summary.

Two comments were received from the California Department of Fish and Game. The first, in response to the request by the Service for information concerning the Critical Habitat of the CVFTL contained in the 1978 proposal, noted that habitat loss had been proceeding faster than recommended protective measures. It said that the Department was reevaluating its former position (in response to the notice of review) of opposing listing. The letter further noted that, in the opinion of the Department, development had and continued to have an impact on where CVFTL occur and that flood control projects and the planting of windbreaks might also be affected. In a later letter (July 1, 1980), the Department stated that the CVFTL qualifies for listing as endangered, not threatened, based on additional surveys conducted by a number of biologists. The letter noted that the only way to protect this species is by the protection of its habitat. Finally, the Department provided a general review of the threats faced by the lizard and noted that on June 27, 1980, the CVFTL was protected as endangered under provisions of State law. At the public hearing in Palm Springs, the Department reviewed the biological status of the lizard as well as its listing history within the Department of Fish and Game, and its desire to see an ecological reserve set up. The Department reaffirmed its support of both the listing of the CVFTL on the Federal list and the designation of its Critical Habitat.

As England (see below) notes, there is still between 50-99 square miles of available habitat for the CVFTL. The development of the land is accelerating and needs to be carefully monitored. At this time, though, the Service does not believe the CVFTL is in danger of extinction throughout all or a significant portion of its range (i.e. "endangered"). The Service will cooperate closely with

State officials in the future. Should a change in classification prove warranted as a result of additional studies and monitoring of the habitat, the change will be proposed accordingly.

The Area Director for the Bureau of Indian Affairs did not comment on the status of the CVFTL but recommended deletion of lands within the Agua Caliente Indian Reservation (letter of 11/22/78). These lands are not included in this final rule because the Service believes that more work must be done before their importance to the lizard can be verified. Simply because the Critical Habitat occurs on an Indian Reservation is not justifiable means for excluding it; should future research establish that these areas are of a critical necessity to the survival of the CVFTL, they may be proposed at a later time.

The Administrator for the Soil Conservation Service reported (6/18/79) that SCS did not have any projects which would potentially impact the species. This included projects implemented under Section 216 of Pub. L. 516 (Flood Control Act of 1950). SCS noted that it has windbreak projects in the Coachella Valley but that the impacts must be evaluated on an individual basis. The Service thanks SCS for its comments and notes that the planting of windbreaks may have an adverse impact by preventing blowing sand (see Turner's preliminary work cited above).

The Division Administrator for the California Division of the U.S. Department of Transportation stated that there were no upcoming projects on the Federal-aid system within proposed Critical Habitat but recommended that the boundary of Critical Habitat be drawn to exclude existing transportation corridors. The Service notes that no major transportation corridors occur in this Critical Habitat (see below).

The State office of the Bureau of Land Management in a letter dated 2/15/79 reaffirmed its support of the rule to list the CVFTL as threatened and reviewed briefly the evidence to support the listing. It concluded that "this lizard is in jeopardy unless protective measures are taken soon." In a letter dated 6/23/80 on the reproposal of Critical Habitat, the Director of BLM noted the original letter of support and added that new information would be forwarded, if available; none was received.

The Director of the Office of Environmental Quality of the Department of Housing and Urban Development noted HUD's responsibilities under Section 7 of the Act. He stated that they had asked their Los Angeles Area Office to provide information on impacts and that such

information would be forwarded to the Service; none was received.

The Chief of the Engineering Division of the Los Angeles District, U.S. Army Corps of Engineers, forwarded a preliminary literature search on the CVFTL as well as a review of the scope of work for field reconnaissance in connection with the Whitewater River Basin (also see comments below). The Director of the Veterans Administration Office of Environmental Affairs said that since no VA property was located in the Critical Habitat, it is highly improbable that VA activities would have any impact on the CVFTL.

The Southern California Association of Governments replied that the proposal of Critical Habitat had been circulated for comment in accordance with Part II of OMB Circular A-95 and that the proposal had generated no adverse comments from agencies within the regions. The City Council of Indio supported the proposal but stated that sufficient funds must be included to implement recovery and guarantee protection of Critical Habitat.

A total of 51 comments supported placing the CVFTL on the U.S. List of Endangered and Threatened Wildlife and Plants, with the proposed area of Critical Habitat, but made no additional comments of a biological nature. In addition, 49 comments were received which supported the proposal and cited development of the lizard's habitat as the chief cause of concern in addition to the other factors mentioned in the original proposal and reproposal of Critical Habitat. Many of these comments noted that the State of California had recently protected the lizard as endangered.

One commenter supported the proposal and recommended that the Government buy the land for the lizard's protection. The Service notes that money is available for habitat acquisition from the Land and Water Conservation Fund if it should be determined that this would be in the best interests of the species' preservation. Such a program could be developed in a Recovery Plan prepared in cooperation with State and local interests.

Three individual comments recommended the establishment of the "sanctuary" (i.e. Critical Habitat), apparently confusing Critical Habitat with the establishment of a wildlife preserve for the species. The Service notes that there is widespread and erroneous belief that a Critical Habitat designation is somewhat akin to the establishment of a wildlife refuge and automatically closes an area to most human uses. This is not the case. A

designation of Critical Habitat does not involve the Federal takeover of land, nor does it allow the Federal government to dictate local land use. However, Critical Habitat does apply to all Federal agencies and is an official notification to the agencies that their responsibilities under Section 7 of the Endangered Species Act are applicable in a certain area.

Three commenters favored listing and reviewed in various amounts of detail the biological information outlined in the various Federal Register documents. One comment favored listing and reviewed the plan of local developers to "save" the lizard. However, this person stated that local developers had been aware of the problem for at least five years and appeals for their assistance in setting up a reserve had been repeatedly made. Yet this individual states that no response to these appeals was received.

One individual supported the proposal but recommended a larger area be incorporated as Critical Habitat. The Service points out that Critical Habitats are those areas of land, water, and air space felt to be critical to the species' long-term survival or recovery. An attempt is made to delimit Critical Habitat areas as carefully as possible. If new information demonstrates additional Critical Habitat areas for a species, they must be the subject of a new Federal Register proposal.

At present there are sufficient data available to designate as Critical Habitat only a portion of the remaining blow-sand habitat in the Coachella Valley. The basis for the proposed Critical Habitat (PCH) recommendation was the study of England and Nelson (1976) and, more recently, Turner *et al.* (1978) and Weaver (1978) from which the following information is drawn.

The area of PCH located south of Ramon Road and north of Interstate Highway 10 is the only area that has been studied with sufficient intensity to provide adequate information on the density of fringe-toed lizards, approximately four per acre, and the physical and biological components of the habitat essential for the survival and recovery of the species. The portion of the recommended Critical Habitat generally north/northwest of Ramon Road is an area that has been identified as the source of 50 percent of the wind-blown sand which enters the area from Thousand Palms Canyon, in the northeast portion of the PCH, to the north of Ramon Road. A source of wind-blown sand is essential to maintain the high mesquite dunes and creosote bush sand hummocks south of Ramon Road that constitute the best known habitat of the Coachella Valley fringe-toed lizard.

One commenter gave his feelings concerning the "Friends of the fringe-toed lizard," a group of developers and others united in an effort to prevent this species' listing. He said that these individuals are not friends of the lizard and included newspaper clippings showing pro-development statements by the group's organizers.

One commenter, in supporting the proposal, stated that in his opinion the proposed Whitewater River Basin project would not have an effect on the CVFTL, that the proposed Critical Habitat is large enough to provide depth, and that the "preserve" must be fenced to exclude ORV's which, in his opinion, are more of a threat to the lizard than development. This commenter also suggested a corridor should be established as a cushion to the "preserve" (which he believed should be greater than 10 mi<sup>2</sup> but less than 20 mi<sup>2</sup>) and that the "preserve" should be in areas least attractive to developers yet best for the lizard. The Service notes that the designated Critical Habitat is slightly less than 19 mi<sup>2</sup> but that a preserve is not the same as Critical Habitat (see previous comments). Also, the Service believes this area best fulfills the requirements of Critical Habitat as defined by the Act (also see previous comment). The Service agrees that ORV's could pose a major threat to the continued existence of this species.

One commenter reviewed the taxonomic status of this species and stated that there was no doubt in his mind about *U. inornata* not being conspecific with other *Uma* since it differs in nuptial colors, morphological features and behavioral patterns. This person also states:

I am in accord with the proposal for the 11,920 acre critical habitat as proposed. In fact, because development of the valley proceeds a small patch at a time, this is essentially the only piece of habitat large enough to protect the species. Other areas are smaller, and already fragmented to various degrees. The need for a critical habitat of the size proposed is crucial. The reason is that the sandy areas of the Coachella Valley are largely covered with small accretion dunes whose water tables on which incubation relies are often transitory. This results in a spotty pattern of successful reproduction on some areas of relatively deep sand interspersed in among the smaller dunes. Thus only a large and rather diverse area can be expected to protect the species. I consider the situation critical, and if the form is to be protected successfully only the proposed action can succeed.

One commenter concurred with the summary of factors affecting the species based on his field experience in the Coachella Valley beginning in 1971. He

noted that there have been many significant changes in the populations he has observed because of ORV use, collecting and floodwater wash. However, he stated that he believed the three *Uma* in the Southwest are conspecific based on his electrophoretic work. The Service believes that while the species are related, there are other compelling reasons (see above) for recognizing *U. inornata* as distinct. The populations of *Uma* are allopatric and therefore gene flow would be extremely difficult to demonstrate. Assigning taxonomic allocations solely on biochemical means (using a rather small number of loci), ignores other lines of evidence and should not be used alone to generate classification. To quote from Chambers (1980): "The standard error of each calculated I is another factor that negatively affects the comparative value of genetic identities. Although the average I values at different levels of taxonomic divergence in the *D. willistoni* group are useful standards for evaluating taxonomic divergence between populations of other organisms, taxonomic decisions based solely on such comparisons will often be erroneous." Ryman *et al.* (1979) also discuss the problem of reproductive isolation with little genetic divergence.

One commenter supported the listing because of development threats but noted that the Critical Habitat was based on lizard distribution and excluded sand sources which must be included to preserve the habitat. This person also noted the stabilizing effects of Russian thistle and the behavioral differences of the CVFTL population northeast of Indio Hills. These lizards use mammal burrows for escape instead of sand swimming. The Service notes that this letter was written prior to the re-proposed Critical Habitat which now includes the blow sand sources. The same person wrote another letter (in 1980) again supporting listing but recommending a comprehensive program of research be instituted on habitat requirements, carrying capacity, and population dynamics. He believed listing per se may not satisfactorily protect the CVFTL because of continuing development (increased building rates, the Corps of Engineers flood control projects, and the Southern California Edison 500 KV transmission line). He believed that an annual status review should be conducted to determine if the lizard is endangered, not threatened. The Service acknowledges the need for continued research on this species; if data are presented which show that this species is continuing to decline and/or lose

habitat, a change in its status will be proposed accordingly.

Another commenter noted that additional Critical Habitat may be warranted depending on future research and he reviewed his past work on the CVFTL with regard to amount of habitat lost in recent years as well as development projections. He concluded:

It is important to note that the remaining 99 square miles include marginal and degraded habitats (eg., by ORV use or windbreak construction) as well as prime habitat. It is my opinion that a detailed determination of habitat 'quality' would reveal that only 50-70 miles of optimal habitat remain.

One commenter extensively discussed the uniqueness of the population on the northeast edge of the Indio Hills. In addition, he discussed how Critical Habitat is much misunderstood by the public and strongly recommended inclusion of the sand source. He recommended consolidation of Critical Habitat to as few areas as possible to reduce opposition. One commenter reviewed the report of A. S. England with regard to habitat loss and reviewed past attempts to establish a reserve for the CVFTL. He discussed the proposed improvement district which he felt would lead to more habitat destruction. The taxonomic question was reviewed and this individual concluded that it is a valid species.

One comment expressed general concern as a property owner that if the land were taken for a reserve, then he should get full market value. He said he was not sure what the designation would mean although he did not necessarily oppose it. The Service points out that a designation of Critical Habitat applies only to Federally authorized or funded projects; it does not restrict the activities of private landowners on their lands. If land acquisition became desirable on this individual's property, a price would have to be agreed to by the owner at a fair marketable value set by mutual agreement. Land acquisition may be desirable as a way to preserve this species. However, it should best be done only under mutually favorable terms.

There were 26 comments in general opposition to the proposal and/or designation of Critical Habitat for the CVFTL; many of these comments stated that people are more important than lizards, that there should be more growth and development, that the government should concentrate on flood control, or that there should be no "sanctuary." The Service points out that the only place on earth the CVFTL occurs is in the Coachella Valley and it believes that ways must be found to

preserve the native Coachella Valley ecosystem.

There were 8 comments which opposed listing and recommended that the Service listen to the "Friends of the fringe-toed lizard" and not make "a hasty bureaucratic decision." The Service points out that the status of this species has been under review since 1977 and that all proposals have been based on the best biological and commercial data available as required for listing under provisions of the Act. The decision to list this species is not hasty and is neither arbitrary nor "bureaucratic" since Congress clearly meant for species qualifying as biologically threatened to be listed under provisions of the Act.

Prior to the reproposal for Critical Habitat in 1980, there were 8 telegrams and four letters requesting that a public hearing be held to receive local input on what were perceived to be adverse economic impacts. As noted in the "Background" section, a public meeting was held June 20, 1980, and a public hearing on July 7, 1980, both in Palm Springs, California.

There were five comments which stated that a "sanctuary" should be found in a place other than the area designated as Critical Habitat. Concern was expressed about possible effects of such a designation on flood control projects and there were protests about "the great deal of land set aside." The Service has pointed out that Critical Habitat is not a sanctuary (see also Schreiner, 1976). The Service also noted that the Los Angeles District of the U.S. Army Corps of Engineers is presently investigating potential flood prevention measures in the Whitewater River Basin as authorized by Congress in the Flood Control Act of 1937 and by resolution adopted on May 10, 1977 by the Committee on Public Works and Transportation of the U.S. House of Representatives. This study will culminate in the preparation of a survey report in mid-1981.

Flood control alternatives considered have included flood plan management (nonstructural); construction of a channel from Windy Point to the Salton Sea (the tentatively selected EQ plan); construction of a flood control dam at Windy Point and "snow fences" to retard blowsand; and construction of two flood control dams and "snow fences."

Because of the nature of the source of blowsand in the Coachella Valley, the area proposed for designation as Critical Habitat will not be affected by the alternatives under consideration.

Two commenters stated that CVFTL also occurs in the Algodones dunes and

Kelso dunes and therefore the land does not qualify as Critical Habitat in the Coachella Valley. The Service points out that this is not correct. The commenters are confusing *Uma inornata* with the fringe-toed lizards *Uma notata* and *Uma scoparia*.

The Rancho Mirage and Coachella Chambers of Commerce submitted identical comments and stated:

1. The construction of the sewer line to serve 1000 Palms will be cancelled.
2. The construction of the 500 KV transmission line now in planning will have to be cancelled or re-routed.
3. Expansion of 1000 Palms to the east will be blocked by a cut-off of development funds (VA-FHA, etc.).
4. Planned agricultural expansion facilitated by the projected northward construction of a branch of the Coachella Canal will be barred.
5. Flood control options open to the Army Corps of Engineers to protect their property will be restricted.

The Service replies that the sewer line is not being constructed with Federal funds. Therefore, no impact or consultation will result from the designation of Critical Habitat. Only a small portion of the Critical Habitat would be affected by the 500 KV transmission line. It is not anticipated that the existence of the transmission line would be detrimental to the species. Neither VA nor FHA guarantees loans for large parcels of land. However, VA will consider loan guarantees on mobile homes and mobile home lots as well as regular homes. Generally, land sales are so brisk in this area that sellers demand and receive cash payment in full. Virtually no land is sold with VA/FHA-guaranteed loans. Most developments sell out within the first week of sales. Even if a seller were willing to sell via a FHA/VA loan, the buyer's cash deposit does not hold the property unlike real estate transactions in other areas. By the time the buyer qualifies for the VA/FHA loan, the seller quite possibly will have sold the property to a buyer with cash. Hence, the economic impact of determining Critical Habitat has a negligible impact on VA/FHA loans.

The Service is not aware of any planned construction of a northward branch of the Coachella canal. And again, the Service points out that no flood control options are automatically closed or halted. Should a project be termed to have an impact on the CVFTL after it is listed, the Service will work in close cooperation with any agency to minimize impacts of the rules on activities in the Coachella Valley area. No automatic limitations are imposed by a designation of Critical Habitat. It does, however, assist Federal agencies in

insuring that their actions are not likely to jeopardize the continued existence of the species (Schreiner, 1976) or appreciably diminish the value of that habitat for the species, 50 CFR 402.02.

There were 7 comments which stated a belief that the preliminary economic analysis by the Service was incomplete and does not address secondary impacts of residential, commercial and industrial development.

A preliminary economic analysis considers all relevant information which the Service is able to gather from response to the letters sent out requesting such data and from field investigation. At the public meeting it was hoped that any data inadvertently overlooked would be brought forward. In the case of the fringe-toed lizard no substantial new data suggested that an area of economic impact was overlooked. In almost all cases the economic impact is limited to the loss of federal funds, not to the issuance of federal permits which would limit prohibition of development. See discussion below.

Two comments stated that while there is sufficient information to list the CVFTL biologically, there is not in "regulatory" terms. The Service points out that species must be listed on the basis of the best available biological or commercial data. It is unclear what is meant by saying there is not enough regulatory data on which to list the lizard.

While opposing the listing, one comment reviewed the ways in which the Riverside Planning Department is involved in protection of the CVFTL, that is, by either accepting or rejecting a project. It was implied that there would be no alternatives. The Service points out that rarely would an "all or none" situation exist and, as stated previously, it will cooperate with all parties to minimize impacts. One comment stated that an ecological reserve managed by a government agency has a great deal of merit.

Three comments reviewed flooding problems in the Coachella Valley and proposed measures to stop it. They opposed Critical Habitat since they felt it would adversely affect these projects. Also, they stated that blow sand must be controlled. See the Service's previous comments.

Six comments reviewed in very general terms a land exchange idea for a preserve with the Bureau of Land Management and said that the government was pressing an arbitrary deadline with regard to the listing. The Service points out that Congress set a two year deadline from the time of proposal till listing or else the species

must be withdrawn. This deadline is September 28, 1980 for the CVFTL. Since all the biological data, including new data received since the original proposal, point to the precarious status of the species, the Service has decided to proceed with the listing at this time. The Service welcomes the local initiative to acquire land for a preserve for the CVFTL, but points out this is only one step in the recovery of this species. One comment expressed a general desire to keep the Federal bureaucracy out of the Coachella Valley.

Two comments stated that a designation of Critical Habitat is a "red herring" since Federal agencies may not be involved in anything that endangers the species. One comment stated that the law *per se* won't prohibit development and that the only way is by the establishment of a preserve. It is acknowledged that because the primary threat to the lizard is urbanization and agriculture, and that because virtually all of its potential habitat is in private ownership and developable, the listing *per se* of the CVFTL would in no way assure adequate protection of the habitat.

The Endangered Species Act does not prohibit development which uses private, local or State funding, and does not require consultation for the use of such funds unless a Federal permit would normally be required. The best way to insure the survival of the lizard is to insure the protection of its habitat and necessary blow sand sources. Two comments supported a preserve should one be developed, although one of these still opposed listing the species as threatened.

Two comments opposed the listing stating that no population study or count had been made. The Service notes that an exact population count is not a prerequisite for listing. The loss of habitat and the continuing pressure to develop the species' remaining habitat (as outlined in the "Background" section and references contained in the literature cited section) adequately justify the listing of this species as Threatened. Two comments stated that there is no discussion of how much territory is needed to preserve the lizard and that the goal of the Act is to preserve the species, not protect the habitat in toto. Therefore, the species should not be listed. The Service points out that only roughly 19 square miles of the best habitat have been designated as Critical Habitat out of a total of perhaps 99 square miles of available habitat. Since no preserve is involved, virtually all the land inhabited by this species is still not protected. The

purpose of the Act is stated in its preamble: "The purposes of this Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section."

The Service also points out that since the Coachella Valley is being developed at a rapid rate, it is conceivable that in subsequent years the Critical Habitat may contain the only sizable block of contiguous land which is suitable as CVFTL habitat. Reserves and other natural habitats are frequently regarded as resembling islands in that they will eventually become small isolated fragments of formerly much larger continuous natural habitat (Wilcox 1980). Island biogeography theory indicates that the smaller the area, the higher will be the extinction rate (Diamond 1975). Additionally, in small populations gene frequencies will change from one generation to the next, eventually leading to an increase in homozygosity which, if unchecked, can result in fixation of loci with a resultant loss of genetic variability (Franklin 1980). What this means is that with a reduction in genetic heterozygosity, there will be a concomitant decline in survival of offspring and a decrease in parental fecundity (Sennar 1980). In short, it would be biologically unsound at this time to make a determination as to the minimum amount of habitat necessary to ensure this species' survival.

One comment stated that since Proposition 13 cut off funds, the local governments will want Federal funds to control water and that a designation of Critical Habitat will prevent this. The Service points out that this is not necessarily true (see previous discussion). One commenter provided a general comment about how Critical Habitat bisects "a piece of property currently under study for a specific plan". This person did not provide any elaboration.

One comment stated that the CVFTL is neither Threatened nor Endangered and does not qualify for listing. The Service replies that the evidence provided by A.S. England, other researchers, and the California Department of Fish and Game, clearly refutes this statement (see references and discussion in "Background" section). One comment stated that an E.I.S. should be prepared. The Service

does not believe that an E.I.S. is called for in this case.

One comment stated that there has been no study of the adaptability of the CVFTL and that the Act is being used to freeze evolution. The Service replies that a lack of understanding of evolutionary processes is shown by this statement. Evolution is the slow gradual change of gene frequencies in response to a complex set of environmental, biological, and physiological selection pressures. The CVFTL is the result of these processes; evolution in this case has produced a lizard uniquely adapted to aeolian conditions. The species will not suddenly alter its morphological and behavioral adaptations when its habitat is destroyed. By preserving this lizard, evolution will be allowed to continue instead of freezing (or ending) it by the process of extinction. This person also presented a position paper outlining the goals of the "Friends of the fringe-toed lizard."

The Army Corps of Engineers, at the public hearing, reviewed possible flood and blow sand control measures and stated that alternatives under consideration will not affect the CVFTL nor is the designation of Critical Habitat expected to require consultation under Section 7 of the Act. However, they believe that the main project will be impacted by the listing since it would reduce blow sand. They also believe that the preliminary economic analysis is inadequate; they suggested that the economic analysis address land exchange. Finally, they said "the Corps of Engineers is not adverse to the protection and recovery of endangered species" but "is concerned that all impacts of such actions be accurately identified . . ." The Service disagrees with the Corps' statement concerning the adequacy of the economic analysis (see discussion above). The Service also disagrees that land exchange should be discussed in an economic analysis at this time. Service lands are not involved and the exchange being offered BLM does not include even 50 percent of the designated Critical Habitat (and excludes the main blow sand sources). No monetary assessment of these lands is as yet available. Because of deadlines for listing, the Service does not believe that it is prudent or biologically justified to delay the listing until they are assessed. As stated previously, the Service will fully cooperate to mitigate listing impacts once these have been adequately identified. More detailed information is needed before this can be done.

Concern was expressed by some local governments that the designation of

Critical Habitat will limit ability to maintain, rehabilitate and/or upgrade general plan roads when the need for such action arises. Also, they were concerned that the designation may make these roads forever ineligible for Federal funding through the F.A.S., S.O.S., Disaster Aid, and other FHWA programs. This could seriously disrupt the traffic circulation system in the Thousand Palms/Indio Hills area.

The Service replies that the designation of Critical Habitat is not expected to disrupt Riverside County's general plan for the local area. Expansion of that system with Federal funds may require consultation. The designation does not make these roads ineligible for F.A.S., S.O.S., Disaster Aid and other FHWA programs.

Concern was expressed by several individuals that oil or gas production might be affected. The Service notes that there is no oil or gas production within the Critical Habitat. There is no indication of any current exploratory or developmental drilling within its boundaries or elsewhere in the Coachella Valley.

Concern was expressed by a few commenters that natural gas pipelines crossing the Critical Habitat might be affected.

The proposed rule notes that a natural gas pipeline crosses the northern part of the Critical Habitat. Examination of available maps indicates that Southern California Gas Company operates two 30-inch diameter pipelines across the area. These are intrastate pipelines which are not within the jurisdiction of FERC. The continued operation of these existing pipelines should not be affected by the Critical Habitat designation.

There are no currently proposed interstate pipelines that would be routed across the proposed Critical Habitat. Since the precise routes of any future natural gas pipelines cannot be predicted, it is impossible to completely rule out possible conflicts between the Critical Habitat and future projects before the Commission. However, the activities associated with pipeline construction and operation could probably be carried out so as not to significantly affect the Critical Habitat. Therefore, it is doubtful that natural gas pipelines would have to be precluded from the Critical Habitat.

Finally, concern was expressed that geothermal and solar development would be inhibited by the declaration of Critical Habitat.

The Service replies that while the possibility exists for solar and geothermal development in the Critical Habitat, the probability of this occurring is small considering that adjacent areas

not selected for Critical Habitat designation possess reasonably identical solar and geothermal potential. The Federal Energy Regulatory Commission pointed out its responsibilities under PURPA to encourage small power production and cogeneration facilities and to carefully evaluate all applications made for such facilities, regardless of their proposed location. The Fish and Wildlife Service was assured that during such evaluations the Commission will comply with appropriate consultation requirements of the Endangered Species Act should the proposed facilities conflict with Endangered species or designated Critical Habitats.

Development of solar facilities would not be expected to be compatible with the habitat requirement of most animal or plant species, regardless of mitigative measures taken. Geothermal development, although requiring less area than solar per megawatt of capacity, would probably cause adverse effects on habitat within a reasonably large area around the geothermal site, however these effects would be amenable to mitigation. The Federal Energy Regulatory rules are not expected to be a major incentive for developing solar or geothermal facilities in the Pacific region of the U.S. These two energy resources are abundant in the area in or around the habitat of the CVFTL.

After a thorough review and consideration of all the information available, the Director has determined that (1) the Coachella Valley fringe-toed lizard is likely to become an Endangered species throughout all or a significant portion of its range due to one or more of the factors described in Section 4(a) of the Act, as specified in the reproposal of May 28, 1980 (45 FR 36038-36041), and reprinted in this listing document (see below) and (2) listing this species as Threatened with the specific Critical Habitat will, with appropriate measures undertaken by the State of California, provide it with necessary protections to ensure its survival.

The summary of factors affecting the species, as required by Section 4(a) of the Act and published in the *Federal Register* of May 28, 1980 (45 FR 36038-36041) are reprinted below. These factors are as follows:

1. *The present or threatened destruction, modification or curtailment of its habitat or range.*—The historical range of the Coachella Valley fringe-toed lizard was approximately 324 square miles, which probably included about 200 miles square of suitable habitat. The results of a study funded by the California Department of Fish and

Game indicated that by 1975 the historical range of this species had been reduced by 27 percent to 236 square miles. Further, suitable habitat, including marginal areas, comprised only 120 square miles or a reduction of 40 percent. Aerial photographs taken by the U.S. Army Corps of Engineers in 1979, and ground survey conducted in 1975, indicate further loss of suitable habitat. According to these surveys, A. S. England estimated that some 99 square miles of suitable habitat still remained as of 1979. These losses have occurred as a result of rapid urban and agricultural growth in the Valley since 1945, and this trend is expected to continue at an even greater pace in the future.

In 1940, the human population in the Coachella Valley was 12,000. By 1970, it had risen to over 100,000, and has been projected to reach 139,500 to 164,000 by 1990. Population projections made for the early 1970's already have proven to be too low. These predictions were only for permanent populations, and in 1971, seasonal residents represented an additional 40 percent of the total population. At the present time, none of the lizard's habitat has been permanently preserved. An analysis of city and county general plans and county zoning has shown that all remaining habitat could eventually be developed.

Much of the habitat in the southern and eastern part of the Valley is being invaded by dense stands of Russian thistle (*Salsola iberica*), a noxious weed introduced from Europe. This is a recent phenomenon and may be having a detrimental impact on the blow-sand habitat of the fringe-toed lizard by causing stabilization, and thus allowing other plants to invade. Tamarisk (*Tamarix aphylla*) windbreaks have been planted throughout the Valley to protect agricultural and urban developments. A row of 40 foot trees can create a windshadow up to 1,200 feet wide on the leeward side of the windbreak, causing changes in soil movement patterns. The potential effects of these plantings on fringe-toed lizard populations are not known.

There is heavy off-road vehicle use in parts of the Valley. Studies in other areas show that this activity can have significant negative effects on densities and biomass of vertebrate populations.

**2. Utilization for commercial, sporting, scientific or educational purpose.**—Although existing State regulations prohibit collecting fringe-toed lizards without a special permit, collecting for the pet trade may be continuing. This is due primarily to a sharp increase in prices paid for reptiles.

During the spring of 1978, several violations involving the Coachella Valley fringe-toed lizard were issued for over-collecting without a license. The extent of this problem is not known.

**3. Disease or predation.** Not applicable.

**4. The inadequacy of existing regulatory mechanisms.**—To the present, nothing has been done to prevent the continued loss of Coachella Valley fringe-toed lizard habitat through conversion to urban and agricultural land uses. Although a county ordinance restricts the use of off-road vehicles on private lands without possession of written permission from the landowner, heavy use continues in certain areas and habitat conditions have deteriorated.

**5. Other natural or man-made factors affecting its continued existence.** Not applicable.

#### Critical Habitat

The Act defines "Critical Habitat" as (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of Section 4 of this Act, on which are found those physical or biological features:

(I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by the species at the time it is listed in accordance with the provisions of Section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

At present there are sufficient data available to propose as Critical Habitat only a portion of the remaining blow-sand habitat in the Coachella Valley. The basis for the Critical Habitat (CH) recommendation is the study in England and Nelson (1976) and, more recently, Turner *et al.* (1978) and Weaver (1978) from which the following information is drawn.

The area of CH located south of Ramon Road and north of Interstate Highway 10 is the only area that has been studied with sufficient intensity to provide adequate information on the density of fringe-toed lizards, approximately four per acre, and the physical and biological components of the habitat essential for the survival and recovery of the species. The portion of the recommended Critical Habitat generally north/northwest of Ramon Road is an area that has been identified as the source of 50 percent of the wind-blown sand for the area to the south of Ramon Road. The remaining 50 percent

of the wind-blown sand enters the area from Thousand Palms Canyon, in the northeast portion of the CH, to the north of Ramon Road. A source of wind-blown sand is essential to maintain the high mesquite dunes and creosote bush sand hummocks south of Ramon Road that constitute the best known habitat of the Coachella Valley fringe-toed lizard.

The main sources of blow-sand in the Coachella Valley are the Whitewater River and Thousand Palms Canyon. The predominant winds, which sometimes reach 90 mph, blow from the northwest and move the fine sand down the valley towards the southeast.

Three general types of blow-sand deposits occur in a mosaic pattern across the Coachella Valley: sandy plains, sand hummocks, and mesquite dunes. The Coachella Valley fringe-toed lizard is restricted to these habitats. Sand hummocks (small and deposits two to five feet high), which form on the leeward side of bushes, are the most common type of blow-sand deposits in the Coachella Valley comprising about 80 percent of the fringe-toed lizard habitat (England and Nelson 1976).

Army Corps of Engineers proposals for flood control structures in the U.S. Whitewater River also would facilitate urban expansion in the valley. With or without these developments, however, agriculture and urbanization are continuing to eliminate more fringe-toed lizard habitat each year and there are no reasons to believe that these processes will stop until all private land in the Coachella Valley has been developed. The Service therefore believes that the physical and biological features of this habitat are such as to require special management considerations and protection.

Section 4(b)(4) of the Act requires the Service to consider economic and other impacts of specifying a particular area as critical habitat. The Service has prepared an impact analysis and believes that economic and other impacts of this action are not significant in the foreseeable future. The Service is notifying Federal agencies that may have jurisdiction over the land and water under consideration in this action.

#### Effects of this Rule

Section 7(a) of the Act provides, in part:

"(1) The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the

conservation of the endangered species and threatened species listed pursuant to Section 4 of this Act.

"(2) Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an 'agency action') is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available."

Provisions for Interagency Cooperation are codified at 50 CFR Part 402. This rule now requires Federal agencies not only to insure that activities they authorize, fund, or carry out, are not likely to jeopardize the continued existence of the Coachella Valley fringe-toed lizard, but also to insure that their actions do not result in the destruction or adverse modification of this critical habitat.

Section 4(f)(4) of the Act requires, to the maximum extent practicable that any rule which determines critical habitat be accompanied by a brief description and evaluation of those activities which, in the opinion of the Director, may adversely modify such habitat if undertaken, or may be impacted by such designation. Such activities are identified below for this species.

Several activities involving Federal agencies are presently known which may have an impact on the habitat of the Coachella Valley fringe-toed lizard. These include construction of a sewer line if Department of Housing and Urban Development support is involved, construction of a 500 KV transmission line if additional Federal licenses and permits are required by the Federal Energy Regulatory Commission and the Bureau of Land Management, and possible sale of lots, homes and mobile homes using FHA/VA guaranteed loans. Outside the proposed Critical Habitat area, but in fringe-toed lizard habitat, there is a proposed northward extension of the Coachella Canal that threatens to expand greatly agricultural developments in the Valley.

The U.S. Army Corps of Engineers is investigating potential flood hazards and the feasibility of various flood

control alternatives on the Whitewater River in the northwest portion of the Valley. Such control would facilitate urban expansion in the Valley. No other Federal activities are known that may impact the habitat of the Coachella Valley fringe-toed lizard.

It should be emphasized that Critical Habitat designation may not affect any of the Federal activities previously mentioned. If appropriate, the impacts will be addressed during conferral or consultation with the Service as required by Section 7 of the Endangered Species Act, as amended. Modification, and not curtailment, of the affected Federal activity has traditionally been the result of Section 7 consultations. Discussion of each of the mentioned projects is presented in the response to comments above.

Endangered species regulations already published in title 50 of the Code of Federal Regulations set forth a series of general prohibitions and exceptions which apply to all Endangered species. The regulations referred to above, which pertain to threatened species, are found at Section 17.31 of title 50, and are summarized below.

With respect to the Coachella Valley fringe-toed lizard, all prohibitions of Section 9(a)(1) of the Act, as implemented by 50 CFR 17.31, would apply. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale this species in interstate or foreign commerce. It also would be illegal to possess, sell, deliver, carry, transport, or ship any such wildlife which was illegally taken. Certain exceptions would apply to agents of the Service and State conservation agencies.

Regulations published in the Federal Register of September 26, 1975 (40 FR 44412), codified at 50 CFR 17.22 and 17.23, provide for the issuance of permits to carry out otherwise prohibited activities involving Endangered or Threatened species under certain circumstances. Such permits involving Endangered species are available for scientific purposes or to enhance the propagation or survival of the species. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship which would be suffered if such relief were not available.

#### National Environmental Policy Act

A final environmental assessment has been prepared and is on file in the Service's Office of Endangered Species. This assessment is the basis for a

decision that this rule is not a major Federal action that significantly affects the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969.

The primary authors of this rule are Dr. C. Kenneth Dodd, Jr. and Dr. Ray Stanton, Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240 (703/235-1975) and Dr. Kathleen Franzreb, Sacramento Area Office, U.S. Fish and Wildlife Service, 2800 Cottage Way, Sacramento, CA. 95825 (916/484-4106).

**Note.**—The Department of the Interior has determined that this is not a significant rule and does not require preparation of a regulatory analysis under Executive Order 12044 and 43 CFR part 14.

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#### Regulations Promulgation

Accordingly, part 17, Subparts B and I,

Title 50 of the Code of Federal Regulations are amended as set forth below:

1. Section 17.11 is amended by adding, in alphabetical order under "REPTILES," the following to the List of Endangered and Threatened Wildlife:

#### § 17.11 Endangered and threatened wildlife.

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Lizard, Coachella Valley fringe-toed.	<i>Uma inornata</i>	U.S.A. (CA)	Entire	T		17.95(c)	NA

2. Section 17.95(c) is amended by adding the following Critical Habitat description after the Critical Habitat description for the Mona ground iguana

#### § 17.95 Critical habitat—fish and wildlife.

(c) Reptiles.

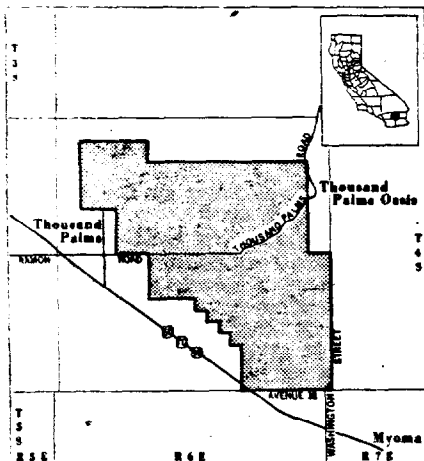
#### COACHELLA VALLEY FRINGE-TOED LIZARD

(*Uma inornata*)

California. Riverside County. S½ Section 5, SE¼ Section 6, E½ Section 7, all of sections 8 through 11, W½ Section 12, W½ Section 13, all of sections 14 through 16, E½ Section 17, E½NW¼ Section 17, E½SW¼ Section 17, all of sections 21 through 26, E½NW¼, NW¼SE¼, E½SE¼, NE¼ Section 27, all of sections 35 and 36, T4S R6E.

#### Coachella Valley Fringe-Toed Lizard

Riverside County, Calif.



Dated: September 19, 1980.

Lynn A. Greenwalt,  
Director, Fish and Wildlife Service.

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